

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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|-------------------------------|---|---------------------------------------|
| In re Application of:         | ) | Confirmation No.: <b>5092</b>         |
|                               | ) |                                       |
| <b>Senn et al.</b>            | ) | Art Unit: <b>1616</b>                 |
|                               | ) |                                       |
| Serial No.: <b>10/801,405</b> | ) | Examiner: <b>Pryor, A.</b>            |
|                               | ) |                                       |
| Filed: <b>March 16, 2004</b>  | ) | Syngenta Docket No.: <b>20835C/D1</b> |

For: **PESTICIDAL COMPOSITIONS**

**BRIEF ON APPEAL**

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being electronically transmitted to the United States Patent & Trademark Office (USPTO) using the USPTO's e-filing procedure on October 12, 2010.

/James D. Withers/

James D. Withers - Reg. No. 40,376

Dear Sir:

This is an appeal from the final Office Action mailed on December 08, 2009 rejecting claims 17-18, 20, 24, 31 and 33-43.

A Notice of Appeal in this application was filed on June 08, 2010, and was received in the USPTO on June 08, 2010.

The \$540.00 fee required under 37 CFR § 41.20(b)(2) for filing an appeal brief has been paid via an electronic fund transfer executed during the filing process of the present brief. The \$1110.00 three-month extension of time fee has also been paid via an electronic fund transfer executed during the filing process of the present brief.

Appellants request the opportunity for a personal appearance before the Board of Appeals to argue the issues of this appeal. The fee for the personal appearance will be timely paid upon receipt of the Examiner's Answer.

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**REAL PARTY IN INTEREST**

The real party in interest is Syngenta Crop Protection, Inc. of Greensboro, North Carolina.

**RELATED APPEALS AND INTERFERENCES**

The assignee, the assignee's legal representatives, and the Appellants submit that there are no related appeals or interferences that are directly affected by or have a bearing on the Board's decision in this appeal.

**STATUS OF CLAIMS**

Claims 17-18, 20, 24, 31 and 33-43 are pending in the present application.

Previously presented claims 1-16, 19, 21-23, 25-30 and 32 have been canceled.

Claims 17-18, 20, 24, 31 and 33-43 stand rejected. Each of rejected claims 17-18, 20, 24, 31 and 33-43 has been appealed. A clean copy of the pending claims is attached in the Claims Appendix section below.

**STATUS OF AMENDMENTS**

No amendments have been filed after the final Office Action dated December 08, 2009.

**SUMMARY OF CLAIMED SUBJECT MATTER**

The claims of the present invention are directed to pesticidal compositions, method of controlling insects using the pesticidal compositions, and plant propagation material treated with the pesticidal compositions.

In independent claim 33, the claimed composition comprises a composition for controlling insects (page 1, lines 12-13), the composition comprising thiamethoxam (page 1, lines 12-26; page 13, lines 7-8) and abamectin (page 2, line 17; page 7, lines 12-13), wherein the weight ratio of thiamethoxam to abamectin is from 10:1 to 1:1 (page 13, line 27 to page 14, line 1).

In independent claim 42, the claimed pesticidal composition comprises a composition for controlling pests comprising a synergistically effect amount of thiamethoxam (page 1, lines 12-26; page 13, lines 7-8) and abamectin (page 2, line 17; page 7, lines 12-13).

In independent claim 43, the claimed method comprises a method of controlling pests (page 1, lines 2-5; page 22, lines 1-5) comprising applying a synergistically effect amount (page 14, line 17 to page 15, line 7) of thiamethoxam (page 1, lines 12-26; page 13, lines 7-8) and abamectin (page 2, line 17; page 7, lines 12-13), to the pests or to plants, plant propagation material, site where the propagation material is brought out, or soil (page 22, lines 13-30).

**GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

The following grounds of rejection are to be reviewed on appeal:

- 1) Whether claims 17-18, 20, 24, 31 and 33-43 are patentable under 35 U.S.C. §103(a) in view of U.S. Patent No. 5,852,012 issued to Maienfisch et al. (hereinafter, "Maienfisch") in combination with The Agrochemical Handbook A0891 (August 1991) (hereinafter, "The Agrochemical Handbook").

### **ARGUMENTS**

#### **I. REJECTION OF CLAIMS 17-18, 20, 24, 31 and 33-43 UNDER 35 U.S.C. §103(a) IN VIEW OF MAIENFISCH AND THE AGROCHEMICAL HANDBOOK**

Claims 17-18, 20, 24, 31 and 33-43 stand rejected under 35 U.S.C. §103(a) in view of the teaching of Maiefisch and further in view of The Agrochemical Handbook. Reversal of this rejection is respectfully requested for the reasons provided below.

In summary, the teaching of Maiefisch in combination with The Agrochemical Handbook, taken alone or in view of the general state of the art, would not have motivated one skilled in the art to combine thiamethoxam with abamectin in order to reproduce Appellants' claimed compositions and methods as recited in claims 17-18, 20, 24, 31 and 33-43.

#### **A. CLAIMS 17-18, 20, 24, 31 and 33-43**

As discussed above, Appellants' claimed invention, as embodied in independent claim 33, is directed to a composition for controlling insects, the composition comprising thiamethoxam and abamectin, wherein the weight ratio of thiamethoxam to abamectin is from 10:1 to 1:1; Appellants' claimed invention, as embodied in independent claim 42, is directed to a composition for controlling pests comprising a synergistically effect amount of thiamethoxam and abamectin; and Appellants' claimed invention, as embodied in independent claim 43, is directed to a method of controlling pests comprising applying a synergistically effect amount of thiamethoxam and abamectin, to the pests or to plants, plant propagation material, site where the propagation material is brought out, or soil..

Claims 17-18, 20, 24, 31 and 34-41 depend from independent claim 33 and recite additional claim features.

#### **1. Art Relied Upon By Examiner Prior**

##### **a. Maiefisch**

The teaching of Maiefisch is directed to oxadiazine derivatives and their use in insecticidal compositions. The disclosed oxadiazine derivatives have a structure as shown by formula (I) and as discussed, for example in the Abstract. The teaching of Maiefisch discloses preferred oxadiazine derivatives beginning in column 3, line 37.

It should be noted that the teaching of Maienfisch specifically discloses thiamethoxam as a possible oxadiazine derivative. See, for example, compound 1.3 in Table 1 of Example H4 in column 20.

The teaching of Maienfisch discloses that the oxadiazine derivatives may be used in combination with other components to form pesticidal compositions. In column 15, lines 44-58, Maienfisch specifically discloses:

The invention therefore also relates to pesticides, such as emulsifiable concentrates, suspension concentrates, directly sprayable or dilutable solutions, spreadable pastes, dilute emulsions, wettable powders, soluble powders, dispersible powders, dusts, granules or encapsulations in polymeric substances, all of which comprise at least one of the active ingredients according to the invention and are to be selected depending on the intended aims and the prevailing circumstances.

In these compositions, the active ingredient is used as a pure active ingredient, for example a solid active ingredient in a specific particle size or, preferably, together with at least one of the auxiliaries conventionally used in the art of formulation, such as extenders, for example solvents or solid carriers, or such as surface-active compounds (surfactants).

Maienfisch also discloses that the oxadiazine derivatives may be used in combination with other insecticidally active ingredients to form pesticidal compositions having broadened activity. In column 17, lines 50-67, Maienfisch specifically discloses:

The activity of the compositions according to the invention can be broadened considerably and adapted to prevailing circumstances by addition of other insecticidal active ingredients. Possible active ingredients which are added are, for example, representatives from the following classes of active ingredients: organophosphorus compounds, nitrophenols and derivatives, formamidines, ureas, carbamates, pyrethroids, chlorinated hydrocarbons and *Bacillus thuringiensis* preparations. The compositions according to the invention can also comprise other solid or liquid auxiliaries, such as stabilisers, for example epoxidised or unepoxidised vegetable oils (for example epoxidised coconut oil, rapeseed oil or soya oil), antifoams, for example silicone oil, preservatives, viscosity regulators, binders and/or tackifiers, and also fertilisers or other active ingredients for achieving specific effects, for example acaricides, bactericides, fungicides, nematocides, molluscicides or selective herbicides.

### **b. The Agrochemical Handbook**

The Agrochemicals Handbook is a 1,500 page book that provides technical data, properties, and uses for hundreds, if not thousands, of pesticides. Page A891 of The Agrochemicals Handbook provides technical data, properties, and uses for the insecticide abamectin.

## **2. The Obviousness Rejection Based on Maiefisch**

Appellants respectfully submit that the teaching of Maiefisch in combination with The Agrochemicals Handbook, taken alone or in view of the general state of the art, would not have motivated one skilled in the art to formulate a pesticidal composition comprising (1) thiamethoxam and (2) abamectin as recited in independent claims 33 and 42 or to use such a pesticidal composition in a method as recited in independent claim 43.

The teaching of Maiefisch discloses the possibility of combining (i) an oxadiazine derivative having a structure as shown by formula (I) with (ii) another insecticidally active ingredient. Further, The Agrochemicals Handbook discloses thousands of possible pesticides including abamectin. However, the proposed combination of the teaching of Maiefisch with The Agrochemicals Handbook does not suggest to one skilled in the art to formulate the specific combination of (1) thiamethoxam and (2) abamectin as recited in independent claims 33, 42 and 43.

In support of an obviousness conclusion, Examiner Pryor states the following from page 2, line 21 to page 3, line 5 of the December 08, 2009 final Office Action:

Mainfisch does not teach the composition or method comprising abamectin. However, The Agrochemicals Handbook teaches that abamectin is an insecticide and that abamectin is applied to crops and binds to soils in order to control insects. It would have been obvious to one having ordinary skill in the art to modify the invention taught by Mainfisch to include the abamectin taught by The Agrochemicals Handbook. One would have been motivated to do this since each reference has the same utility, i.e. each reference discloses insecticidal inventions and since Mainfisch welcomes the addition of auxiliaries and other actives. It is automatic that Mainfisch's modified method would control insects since like instant invention the same active step of applying the composition to seed and plants is recited.



Appellants disagree.

Appellants respectfully submit that the teaching of Maiefisch does not provide any guidance to one skilled in the art to (1) focus on thiamethoxam instead of the other disclosed oxadiazine derivatives, (2) select abamectin from The Agrochemicals Handbook when The Agrochemicals Handbook contains 1500 pages relating to hundreds (if not thousands) of possible pesticides, (3) utilize abamectin instead of another insecticide from the hundreds of pesticides disclosed in The Agrochemicals Handbook, and (4) subsequently combine abamectin with thiamethoxam to form a pesticidal composition. The only motivation to focus on the specific combination of thiamethoxam and abamectin, and not thousands of other possible pesticidal compositions resulting from the combination of the teaching of Maiefisch with The Agrochemicals Handbook, has been gleaned from Appellants' own specification, not from the art of record.

Appellants note that in *KSR International Co. v. Teleflex Inc.*, 127 S.Ct. 1727 (2007) (hereinafter, "the *KSR* case") and cases after the *KSR* case, the Court requires some motivation or reason for one skilled in the art to (i) combine elements of the prior art or (ii) modify a known compound in the way that a new invention does in order to render the new invention obvious. See, for example, the Court decision in *Takeda Chem. Indus., Ltd. v. Alphapharm Pty., Ltd.*, No. 2006-1329 (Fed. Cir. 2007) (hereinafter, "the *Takeda* case"), wherein the Federal Circuit stated:

While the KSR Court rejected a rigid application of the teaching, suggestion, or motivation ("TSM") test in an obviousness inquiry, the Court acknowledged the importance of identifying "a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does" in an obviousness determination. KSR, 127 S. Ct. at 1731. Moreover, the Court indicated that there is "no necessary inconsistency between the idea underlying the TSM test and the Graham analysis." Id. As long as the test is not applied as a "rigid and mandatory" formula, that test can provide "helpful insight" to an obviousness inquiry. Id. Thus, in cases involving new chemical compounds, it remains necessary to identify some reason that would have led a chemist to modify a known compound in a particular manner to establish prima facie obviousness of a new claimed compound.

Although the holding in the *Takeda* case involved motivation for modifying a known compound, Appellants respectfully submit that a similar analysis applies to the required

motivation for selecting and combining possible pesticidal composition components from hundreds (or thousands) of potential pesticidal composition components.

As discussed above and consistent with the holdings in the *KSR* case and the *Takeda* case, the teaching of Maiefisch fails to provide any reason that would have lead one skilled in the art to (1) focus on thiamethoxam instead of the other disclosed oxadiazine derivatives, (2) select abamectin from The Agrochemicals Handbook when The Agrochemicals Handbook contains 1500 pages relating to hundreds (if not thousands) of possible pesticides, (3) utilize abamectin instead of another insecticide from the hundreds of pesticides disclosed in The Agrochemicals Handbook, and (4) subsequently combine abamectin with thiamethoxam to form a pesticidal composition.

For at least the reasons given above, Appellants respectfully submit that a *prima facie* case of obviousness has not been made with regard to the rejection of independent claims 33, 42 and 43 in view of the proposed combination of the teaching of Maiefisch with The Agrochemicals Handbook. Since claims 17-18, 20, 24, 31 and 34-41 depend from independent claim 33 and recite additional claim features, the proposed combination of the teaching of Maiefisch with The Agrochemical Handbook also fails to make obvious Appellants' claimed invention as embodied in dependent claims 17-18, 20, 24, 31 and 34-41. Accordingly, reversal of the rejection of claims 17-18, 20, 24, 31 and 34-43 under 35 U.S.C. §103(a) in view of the teaching of Maiefisch in combination with The Agrochemicals Handbook is respectfully requested.

In addition, for at least the reasons given above, Appellants respectfully submit that evidence of secondary considerations is unnecessary to overcome the obviousness rejection of claims 17-18, 20, 24, 31 and 34-43 in view of the proposed combination of the teaching of Maiefisch with The Agrochemicals Handbook. However, Appellants note that (1) a June 02, 2008 Declaration Under Rule 1.132 (i.e., the June 02, 2008 Declaration of Elke Hillesheim) and (2) a February 27, 2009 Declaration Under Rule 1.132 (i.e., the February 27, 2009 Declaration of Leslie Fuquay) were previously submitted and received by the U.S. Patent & Trademark Office on June 02, 2008 and February 27, 2009 respectively to show synergistic compositions comprising (1) thiamethoxam and (2) abamectin at various weight ratios. Each of (1) the June 02, 2008 Declaration of Elke Hillesheim and (2) the February 27, 2009 Declaration of Leslie

Fuquay is listed in the Evidence Appendix (i.e., page 20 of the present brief). An electronic copy of each declaration is submitted herewith as attachments to the present brief.

**CONCLUSION**

For at least the reasons given above, Appellants respectfully submit that the art of record in combination with a general understanding of the art fails to make obvious the claimed invention as embodied in Appellants' claims 17-18, 20, 24, 31 and 33-43. Accordingly, it is respectfully submitted that each of the above rejections should be reversed.

Please charge any additional fees or credit any overpayment to Withers & Keys, LLC, Deposit Account No. 503025.

Respectfully submitted,

/James D. Withers/

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Syngenta Docket No.: 20835C/D1  
W&K Docket No.: 10075.0051USD1

**CLAIMS APPENDIX**

17. A method of controlling insects, which comprises applying a composition as defined in claim 33, to the insects or to plants, plant propagation material, site where the propagation material is brought out, or soil.
18. A method according to claim 17, which comprises applying the composition to the site where the propagation material is brought out.
20. Plant propagation material treated with the composition defined in claim 33.
24. Plant propagation material according to claim 20, wherein the plant propagation material is a seed.
31. The method according to claim 17, which comprises applying the composition to the soil.
33. A composition for controlling insects, the composition comprising thiamethoxam and abamectin, wherein the weight ratio of thiamethoxam to abamectin is from 10:1 to 1:1.
34. The method according to claim 17, which comprises applying the composition to the plant propagation material.
35. The method according to claim 34, wherein the plant propagation material is a seed.

36. The method according to claim 17, which comprises applying the composition to the insects.
37. The composition according to claim 33, wherein the weight ratio of thiamethoxam to abamectin is from 5:1 to 1:1.
38. The method of claim 34, wherein the weight ratio of thiamethoxam to abamectin is from 5:1 to 1:1.
39. The method of claim 36, wherein the weight ratio of thiamethoxam to abamectin is from 5:1 to 1:1.
40. The method according to claim 17, which comprises applying the composition to the plants.
41. The method of claim 40, wherein the weight ratio of thiamethoxam to abamectin is from 5:1 to 1:1.
42. A composition for controlling pests comprising a synergistically effect amount of thiamethoxam and abamectin.

43. A method of controlling pests comprising applying a synergistically effect amount of thiamethoxam and abamectin, to the pests or to plants, plant propagation material, site where the propagation material is brought out, or soil.

**EVIDENCE APPENDIX**

- June 02, 2008 Declaration of Elke Hillesheim filed under 37 CFR §1.132
- February 27, 2009 Declaration of Leslie Fuquay filed under 37 CFR §1.132



**RELATED PROCEEDINGS APPENDIX**

None